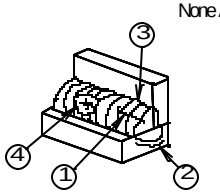
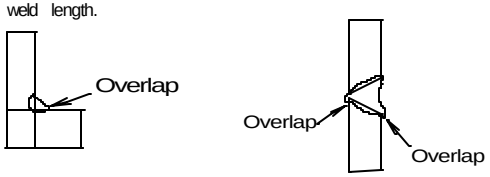
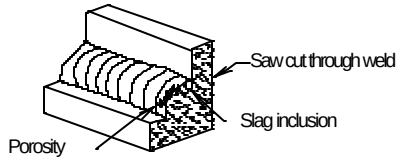
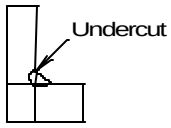
Defect	ANSI A3.0 Definition	Acceptance Criteria
Crack (weld)	A crack located in the weld metal or heat affected zone.	None Allowed.  1 Weld metal crack 2 Heat-affected-zone crack 3 Base metal crack 4 Crater crack
Overlap	The protrusion of weld metal beyond the weld toe or weld root.	The overlap condition shall not exceed 10% of the total weld length. 
Contamination (porosity)	Cavity type discontinunities formed by gas entrapment during solidifacation or in a thermal spray deposit.	1. Maximum pore size shall be 1/16 inch diameter. 2. Welds more than 12 inch long: There shall be no more than six pores for any twelve inch length of weld. 3. Welds less than 12 inch long: There shall be proportionately less pores allowed (Example: A maximum of six pores for six inches of weld.) 
Undercut	A groove melted into the base metal adjacent to the weld toe or weld root and left unfilled by weld metal.  	1. Base metals 0.25 inch and less in thickness: a. The maximum depth of undercut shall be no greater than 10% of the material thickness which has the undercut, the length of the undercut shall not exceed 10% of weld length provided the weld seam meets minimum size. b. Maximum width of an undercut shall not exceed twice the depth. c. Melting of base metal on edges of material is not considered to be undercut. It is acceptable provided: (1) Weld seam meets the minimum size. (2) Melting does not exceed 10% thickness for 10% of weld length. (3) Melting of corners is not considered to be undercut. Melting shall not exceed 25% of material thickness.

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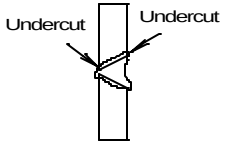
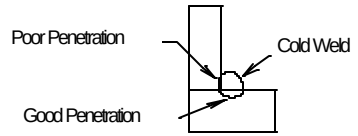
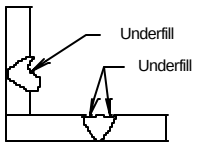
Undercut (continued)	A groove melted into the base metal adjacent to the weld toe or weld root and left unfilled by weld metal.  	2. Base metal is greater than 0.25 inch in thickness: a. Maximum depth of undercut shall be 1/32 inch b. Undercut must have a width no less than twice the depth, i.e., the undercut condition shall not create a notch in the undercut member. c. The length of undercut shall not exceed two inches cumulative in any continuous 14 inch length of weld. For continuous welds less than 24 inches in length, the maximum cumulative length shall be in direct proportion to this limit or one inch whichever is greater. (Example: for an eight inch continuous length of weld, maximum cumulative allowable undercut length is one inch.) d. Melting of base metal on edges of material is not considered to be undercut. It is acceptable provided: (1) Weld seam meets the minimum size. (2) Melting does not exceed 10% thickness for 10% of weld length. (3) Melting of corners is not considered to be undercut. Melting shall not exceed 25% of material thickness
Coldweld	Weld metal does not penetrate the base metal	None allowed. 
Underfill	The surface of the weld metal is below the surface of the base metal  	1. Base metal 0.25 inch and less in thickness: The maximum depth of underfill shall be no greater than 10% of the material thickness. The length of the undercut shall not exceed 10% of the weld length provided the weld seam meets minimum size. 2. Base metal greater than 0.25 inch thickness: a. Maximum depth of underfill shall be 1/32 inch. b. The length of the underfill shall not exceed two inches cumulative in any continuous 24 inch length of weld. For continuous welds less than 24 inches in length, the maximum cumulative length shall be in direct proportion to this limit or one inch, whichever is greater. (Example: for an eight inch continuous length of weld, maximum cumulative allowable underfill length is one inch.